

secrets for cutting glass

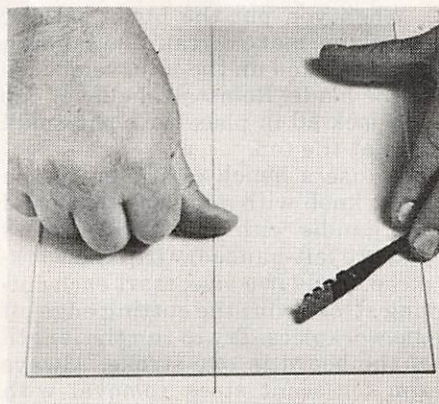
Although there are no flying glass fragments in normal glass cutting, it's wise to wear safety goggles and glass-handler's gloves or other gloves that permit a good grip.

Glass cutting tips

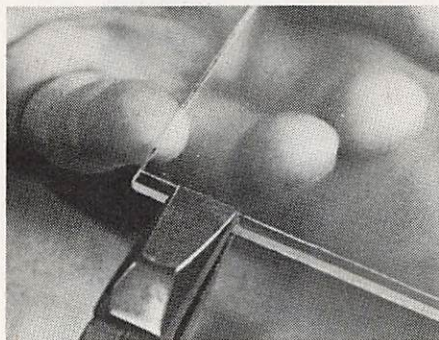
First, clean the glass. Use a razor-blade scraper, commercial glass cleaner or No. 4/0 steel wool to remove dirt.

Based on experience and contrary

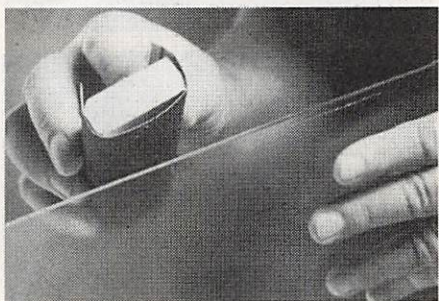
The author is a professional picture framer and a member of the Professional Picture Framers' Assn.



5 To get a good cut, the glass must be clean. After cleaning, oil the surface by running your thumb over the area to be cut.



10 Use glazier's pliers to snap cuts near the glass edge. Or substitute ordinary pliers with masking tape on the jaws.

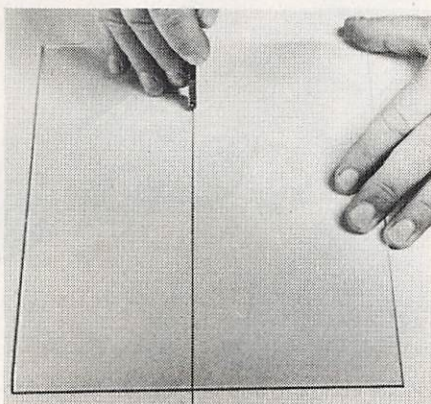


15 Smooth rough edges of the glass with a medium-fine carbide sanding cloth on a block. Power sanders heat too much.

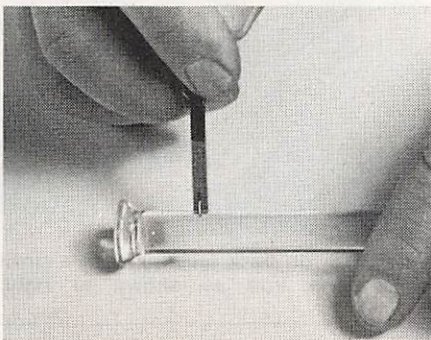
to most instructions, I find that oiling the wheel isn't needed. Cutting wheels are oiled at the factory. This lubrication is sufficient for the life of the wheel. However, if you use your cutter infrequently, you might apply 3-in-1 Oil or kerosene to prevent rust. Remove this oil from the wheel before use.

The cutting table should provide firm, even support for the glass (photo 3). Cut over a sheet of corrugated cardboard or several layers of newspaper.

You can easily cut glass to size for



6 To make a good freehand cut, follow a line drawn on paper under the glass. Keep the cutter perpendicular to the glass.



11 To cut glass rods properly, first score them with a cutter; then make the break.

Commercially cut glass

Some glass can't be cut with a household cutter. Tempered glass used in shower and oven doors must be cut *before* it's fired. Automotive safety glass, a sandwich of glass with a plastic core, must be cut on both sides. The plastic center is cut with a very thin blade.

GLASS-CUTTER MANUFACTURERS

The Fletcher-Terry Co., Spring Lane, Farmington, Conn. 06032
Red Devil Inc., 2400 Vauxhall Rd., Union, N.J. 07083
Stanley Tools, Div. of The Stanley Works, New Britain, Conn. 06050

a storm window or a picture frame. Use the frame as a guide by cutting the glass over it (photo 4). Use picture frame with backside facing upward.

To make freehand cuts, or to cut special shapes (photos 6 and 7), first draw the shape on paper. Slip it under the glass and then make the proper cut.

Before cutting, run your thumb along the cut line (photo 5). This body oil provides lubricant to prepare the surface.

Cutting the glass

First make practice cuts on glass scraps. Using a rule as a straight-edge, hold the cutting tool perpendicular to the pane. Apply pressure and draw the tool across the glass. The cutter should make a small scratch.

Don't gouge the glass or push too hard. A skilled glazier can tell by the hissing sound of the cut if he is exerting the proper amount of pressure.

The wheel should roll smoothly. If it skips and makes an irregular line, the cutter is dull and should be replaced.

If you make an irregular cut, don't retrace it. Doing so will damage the wheel. Make another cut on the backside of the glass along the same line.

After making the cut, hold the glass in both hands between thumbs and index fingers, thumbs on top. If the glass is thick, tap it with the cutter ball to start the break (photo 8). Snap the glass apart with a bending motion (photo 9). The break should be clean and even, without rough edges.

Special glass cuts

Cutting a strip of glass less than 1/4-in. wide is a more difficult job. To make the break after scoring, grip the strip with glazing pliers or standard pliers with jaws wrapped in tape (photo 10).

You can use an ordinary cutter to cut glass rod (photos 11 and 12), and to cut plate glass and heavy mirror. After scoring, use the ball on the cutter to tap under the score to start the break (photo 13). Then place a 1/4-in. dowel or welding rod under the cut and push down on both sides of the glass (photo 14).

Sand rough edges with carbide sanding cloth (photo 15). Don't use a power sander as the glass may overheat and break.

FM

WORKSHOP MINICOURSE

USING A BENCH PLANE

Planing wood is one of the most enjoyable aspects of woodworking. One friend noted that he feels a real sense of accomplishment as he pushes a razor-sharp plane across a board to smooth its surface. As your skill increases, you will be able to set the iron quickly for cutting and to know the joy of producing long, thin shavings with minimal effort. Of

necessity, a plane will force you to learn how to read wood grain.

Before you put the plane to the board in a workshop session, take the time to inspect the blade to make sure it's set up as it should be. The cap iron should be fitted tightly against the blade, just behind its cutting edge. Installed correctly, the cap serves as a shavings deflec-

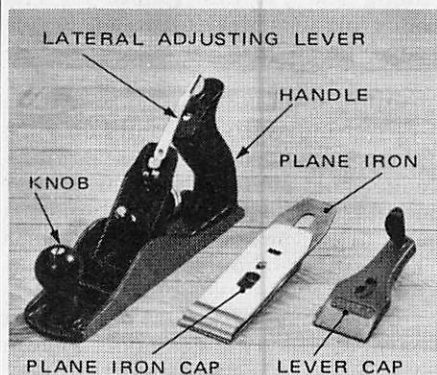
tor and assures continuous planing without clogging. A poorly fitted cap permits shavings to wedge between it and the blade, causing the plane to choke and cease cutting. By flipping up the lever cap and removing it, you can easily remove the blade and cap iron for an alignment check. If they're out of alignment, remove the assembly from the plane and disassemble. When you reassemble it, you should carefully follow the steps shown below.

Replacing the blade

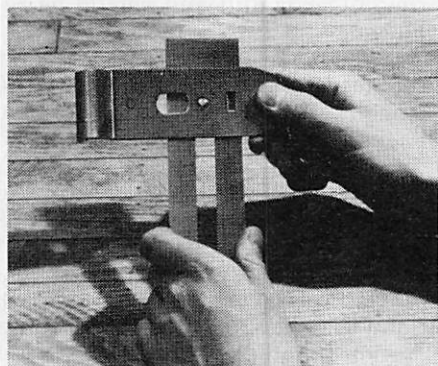
When you put the blade back in the plane, make certain the cap iron is on top, and on the unbeveled side of the blade. Reinstall the lever cap and lock all in place with the small cam at the top.

To use a bench plane, grasp the front knob with your left hand and the handle with your right (unless you are left-handed). Grip the workpiece firmly in a vise; start each cutting stroke with the cutting edge off the workpiece. Try to run the length of the board in one stroke. Always aim for scant stock removal with each pass.

PM



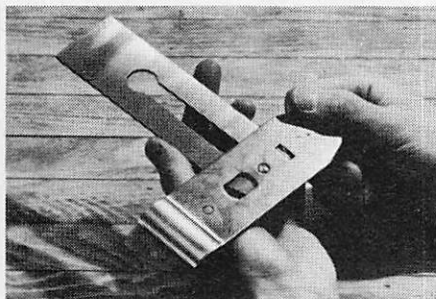
Three major components of the bench plane include the tool pushed across the work, cutting-iron assembly and lever cap.



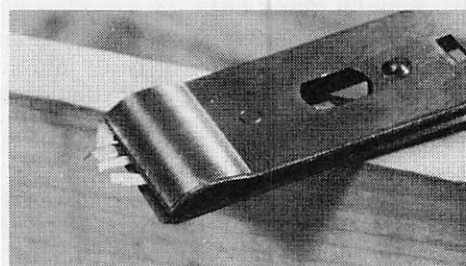
To assemble, place cap on the flat side of the iron with its screw in the slot.



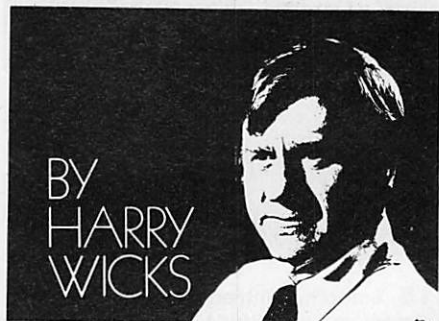
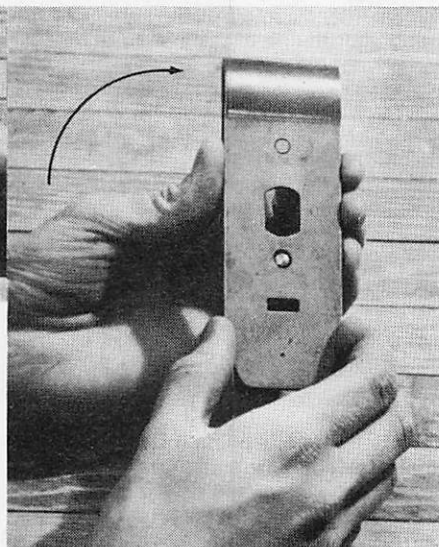
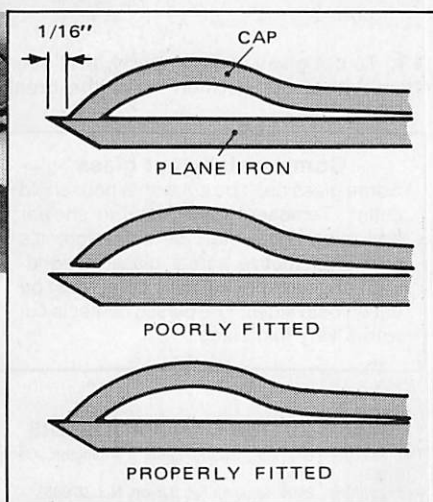
Plane iron (left) and its cap must be put together properly for efficient cutting.



Draw the iron back (above); then align it with plane iron as shown at right.



Push the iron cap forward until it is just behind the plane iron's cutting edge (see drawing, top right). The edge of the cap must fit tightly or shavings will wedge between the cap and the iron, and the plane will be choked (as shown above). When this happens, the plane will cease to cut. When properly assembled, reinstall the iron in the plane and secure the iron with the lever cap.



BY
HARRY
WICKS